SYSTEMS FOR PREDICTING EARTHQUAKES AND METHODS OF EMPLOYING SUCH SYSTEMS

ABSTRACT OF THE DISCLOSURE

A method of predicting earthquakes includes the step of positioning a first transducer array adjacent to a seismically active region and below the water table, i.e., within the zone of saturation. The first transducer array includes a first plurality of seismometers, at least one first clock, and at least one first digitizer. The at least one first clock is in communication with at least one of the first plurality of seismometers, and the at least one first digitizer also is in communication with at least one of the first plurality of seismometers. The method also includes the steps of detecting a plurality of wave movements resulting from dilation of the crust of the Earth prior to an earthquake, and converting at least one of the wave movements into a first voltage. The method further includes the step of discriminating between wave movements resulting from dilation of the crust of the Earth and movements resulting from at least one other event. The step of discriminating includes the step of filtering out wave movements having a frequency below a first predetermined frequency, e.g., about 180 Hertz. The method also includes the steps of determining a time at which the wave movements are detected by at least one of the first plurality of seismometers, converting the first voltage into digital data, and transmitting the digital data and the time from the at least one first digitizer to a communications interface module. Moreover, the method includes the steps of transmitting the digital data and the time from the communications interface module to a data processor, and determining a likelihood of at least one future earthquake based on a number of the wave movements detected over a predetermined period of time.